Defense Information Systems Agency
Department of Defense

Overview of Military Communications Electronic Board Publication (MCEB Pub) 8

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Disclaimer

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Agenda

- **Why MCEB Pub 8?**
- **Pub 8 Background**
- **Pub 8 Content**
- **Pub 8 Status**
- **Myths, Facts, Challenges**

Why MCEB Pub 8?

Electronic Warfare (EW) Community
Spectrum Dependent Software, Systems and Programs

JACS

XXI

NTIA

SPEED USMC

AESOP

Various Data Formats

ITU

SCS

FEDERAL COMMUNICATIONS COMMISSION

This is frustrating!!

Intel Community
Spectrum Dependent Software, Systems and Programs

There has got to be a easier way!!!
What tool do I use?
Why aren't these tools interoperable with coalition forces or national regulators?
Why am I entering the same information over and over?
Why are there so many data formats?

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Pub 8 Background

- **Guidance provided from the Military Communications and Electronic Board (MCEB)**
  - Developed and coordinated by the Spectrum Operations Permanent Working Group (SO PWG)
  - Aligned with Department of Defense (DoD) Net Centric Strategy
  - Coordinated with National Telecommunication Information Administration (NTIA) and the North Atlantic Treaty Organization (NATO)
- **Replaces MCEB Pub 7**
  - One to many data structure
  - Human interface often required
- **Based on NATO's Spectrum Management Allied Data Exchange Format- eXensible Markup Language (SMADEF-XML) data structure**
- **Captures most spectrum related business processes**
  - Frequency Assignments
  - Certification
  - Tactical
  - Analytical data
  - Environmental

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Pub 8 Data Contents

Volume I — **Concept of Operations:** **CONOPS – Text only**

Volume II — **Core Data Elements:** *National Tables of Allocation, Location, Assignment / Allotment, Spectrum Supportability, Transmitter, Reciever, Antenna ,validation checks*

Volume III — **Tactical:** *Force Element, Communication Electronic Operating Instructions (CEOI), Joint Restricted Frequency List (JRFL), Joint Spectrum Interference Report (JSIR)*

Volume IV — **Spectrum Analysis:** *Extended TxRx, Electro Optical (EO), Space, EW, Measured Data*

Environmental: *Electromagnetic Pulse (EMP), Hazard of Electromagnetic Radiation to Personnel (HERP), Hazard of Electromagnetic Radiation to Fuel (HERF), Sun Spot Data (To Be Determined)*

Volume V

Volume VI — **Annexes:** *Pick lists, abbreviated formats, conversion tables, acronyms, abbreviations, distribution, changes, miscellaneous*

Sample Pub 8 Document

INTEL (ELNOT)

Attribute name	Attribute tag	Occurrence	Format
Classification	cls	Optional	C1 Uppercase
DIA Equipment Number	num	Optional	N16
ELNOT Number	elNot	Required	C6 Uppercase
Interim Elnot	tempNum	Optional	C6 Uppercase
Spot Number	spotNum	Optional	C6 Uppercase
Sub-Element Of	TxRxMode, Config		

Description

This is a National element (used by: USA).

Data element ELNOT identifies the ELINT Notation for a specific RF Signal or Signals. It is not nomenclature based, but driven by emission signature. Therefore, equipments that have the same or near same emission signature will have the same ELNOT.

Input Requirement

Enter:

- In **num, the identifying number assigned by the Defence Intelligence Agency (DIA) to an equipment.**
- In **elNot, a five-character letter and number combination that is used to identify a particular emission.**
- In **tempNum, the temporarily assigned code until the permanent code is designated.**
- In **spotNum, a identification number that is assigned to a unique equipment emission.**

The number, which is similar to an ELINT number, provides a standardisation of emission recognition among the NATO countries.

Example

```
<ELNOT num="G1[illegible]-445678912" elNot="H12345" tempNum="J12345" spotNum="K12345"/>
```

Note

The attributes under Element ELNOT are often classified. Therefore the information provided in the examples are not actual data, but only occupy the format of the related data element.

Example

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MCEB Pub 8 Status

- **Current official MCEB Pub 8 dated 02 March 2009**
- **Draft MCEB Pub 8 version 2.0 available March/April 2010 (Target official date summer 2010)**
- **Captures and standardizes the current spectrum management business processes to include all DD1494 data fields**

- **Have captured and incorporated most comments received from the EW, Intel, and Counter RCIED *(Remote Control Improvised Explosive Device)* Electronic Warfare CREW community into Vol IV of Pub 8 (Jammers and Collectors)**

- **Closely collaborating with various DoD spectrum related tools and databases as they prepare to migrate towards Pub 8.**
  - **Spectrum Management**
  - **Electronic Warfare**
  - **Intelligence**
  - **Any one who will listen!!!**

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Pub 8 Facts, Myths and Challenges

MYTHS:

- **Only a Spectrum Manager's data dictionary**
- **A consolidated Spectrum Management database**
- **XML is a Programming Language**
- **XML and Pub 8 will have to be learned and mastered by Spectrum Managers**

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Pub 8 Facts, Myths and Challenges

FACTS:

- **The replacement data dictionary for Standard Frequency Action Format (SFAF) which supports spectrum related functions**
- **Based on eXtensible Markup Language (*XML*)**
- **Used to support DEVELOPERS of Spectrum Management applications**
- **Will redefine our current Spectrum Mgt. tools, business processes, and future spectrum dependent equipments and systems**

Pub 8 Facts, Myths and Challenges

CHALLENGES:

- **Capturing legacy data**
- **Migration of current Spectrum Management Tools**
- **Educating the Spectrum Management and other spectrum dependent communities**
- **Continuous Synchronization of Pub 8 with NTIA and NATO**

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Summary

BOTTOM LINE

Pub 8 will reduce human error, provide higher fidelity of data and support more interoperable systems

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Why Pub 8?

1. **Allows better interoperability between Spectrum Operation tools and databases through XML exchanged data (Nationally and Internationally)**

2. **Higher fidelity of data for Modeling and Simulation**

3. **Reduces the human interaction and errors**

BOTTOM LINE

Pub 8 will reduce human error, provide higher fidelity of dat
and
support more interoperable systems